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Printed in China Part No. 480-130-P Revise 1/04 ©2003 Cobra Electronics Corporation™ 6500 West Cortland Street Chicago, IL 60707 USA



ENGLISH

Operating Instructions for Your GPS 100 S GLOBAL POSITIONING SYSTEM RECEIVER

Cobra Electronics

GPS100

Nothing comes close to a Cobra[®]

Important Information

► CAUTION

The user is responsible for operating this product wisely. The product is intended for use only as a navigational aid and should not be used when precise measurement of direction, location, distance or topography is required.

► CAUTION

GPS (Global Positioning System) is operated by the U.S. government, which is solely responsible for its accuracy and maintenance. The system is subject to changes, which could affect the accuracy and performance of GPS equipment.

► CAUTION

Remove the batteries from the unit if you do not expect to use it for months at a time. As with any batteries, leakage can occur. When re-installing batteries, observe proper polarity.

STOP WARNING

Warning: If you choose to use this device in a vehicle, it is the sole responsibility of the operator of the vehicle to use this device in a safe manner. Be careful to avoid being distracted from safe and proper driving practices.

STOP WARNING

Warning: If you choose to use this device in a vehicle, it is the sole responsibility of the operator to secure the GPS unit so that it will not cause damage or personal injury in the event of an accident.

DO NOT mount the GPS receiver over airbag panels or in a place where the driver or passengers are likely to have an impact with the device in an accident or collision.

Cobra Electronics Corporation[™] reserves the right to change or improve information in this manual without notice. Please visit www.cobra.com for updates or questions.

Customer Support

In this user's manual, you should find all the information you need to operate your GPS 100 S. If you require further assistance after reading through this manual, Cobra® Electronics offers the following customer support services: In the USA:

Automated Help Desk is available in English 24 hours a day, 7 days a week at 773-889-3087. Customer Service Operators are available in English and Spanish at 773-889-3087 Monday to Friday, 8:00 a.m. to 6:00 p.m. CST.

Questions can be faxed to 773-622-2269. Automated Technical Assistance is available in English or Spanish 24 hours, 7 days a week via

e-mail at: productinfo@cobra.com

On-line answers to frequently asked questions (in English only) can be found at: www.cobra.com.

Outside the U.S.A., please contact your local dealer.

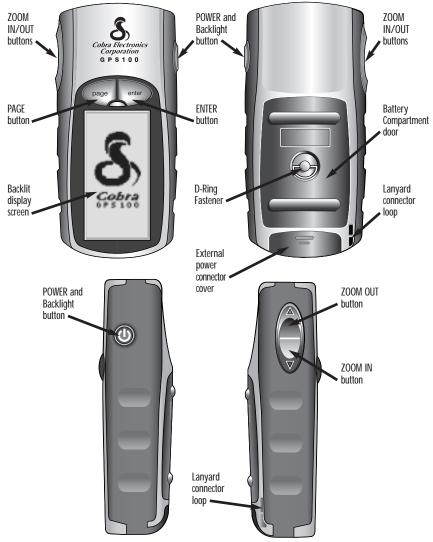
Non-English Manuals

The GPS 100 S is equipped to communicate in the language of your choice: English, Dutch, French, German, Italian, Portuguese, Spanish or Swedish, (see "System Page-Settings: Languages," page 36). For operating instructions in Dutch, French, German, Italian, Portuguese, Spanish or Swedish please visit www.cobra.com/gps-manuals.html.

FCC Compliance

This device complies with Class B of the FCC rules.

Operation is subject to the condition that this device does not cause harmful interference. It must accept any interference received, including that which may cause undesirable operation. \rightarrow





Global Positioning System

Congratulations!

Features:

- You've made a smart choice by purchasing the GPS 100 S Global Positioning System receiver from Cobra Electronics Corporation[™]. Designed to give you access to the most GPS receiver available
- advanced satellite navigation technology available, your GPS 100 S offers you these sophisticated features and capabilities:



- **EXCLUSIVE** 18-channel technology gives you the quickest acquisition time of any handheld recreational
- Locks on to signals from satellites. Delivers accurate positioning within as little as 3 meters
- · Indicates direction of travel to your destination with a compass pointer
- Displays current position, altitude, bearing, time of day, current speed of travel, average speed throughout your trip and estimated time of arrival at your destination
- Stores up to 500 navigational waypoints
- Lets you program and store a navigational route using up to 50 waypoints
- Displays the route to your destination and your progress along that route
- Automatically tracks your travel, and shows you how to return along the same track (up to 10 separate tracks can be stored)
- Up to 100 map datums to choose from
- Display screen can be backlit for maximum visibility
- Is waterproof to IXP7 (submerged 1 meter for 30 minutes) standards and can operate in temperatures from 5°F to 158°F (-15°C to 70°C)

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Customer Signature

Allow 2-3 weeks for delivery. Offer valid in Continental U.S. only. For accessories or orders outside the U.S., please contact your local dealer.

U.S. ORDER FORM

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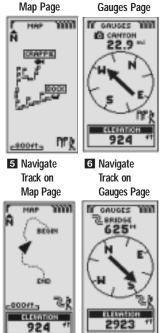
2 "GoTo" on

Gauges Page



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Making Travel Easier

Your GPS 100 S receiver makes travel easier through three major ways: **GoTo a Waypoint** – The GPS 100 S guides you in a straight line to a single point. (See 1 and 2)

Navigate a Route – The GPS 100 gives you the opportunity to select two or more waypoints to create a route. You can then use your GPS 100 S to guide you in a straight line from point to point through your stored route. (See 3 and 4)

Navigate a Track – The GPS 100 S automatically keeps a record of your progress as you travel and gives you a graphic representation or "track log" of the path or track you have taken. You can use the track log to create a track that you can recall for navigation. The track can be navigated in the forward or the reverse direction of the original travel. (See **5** and **6**)

This manual is designed to help you take advantage of these and our many other features. We suggest that you begin by reading the "General Information" and "System Sections" first. If you are not familiar with the satellite navigation technology, these will help you understand the basics. Then, take your GPS receiver outside and practice while you read the sections on how to operate it.

GPS Basics

The Global Positioning System (GPS) is a space-based radionavigation system. It consists of 24 satellites, which orbit the Earth at an altitude of approximately 11,000 miles, and ground stations. GPS provides users with accurate information on position, velocity and time. This is available anywhere in the world and in most weather conditions.

GPS was initiated in 1973 to reduce the proliferation of navigation aids by the United States Department of Defense. By creating a robust system that overcame the limitations of many previously existing navigation systems, GPS became attractive to a broader spectrum of users. GPS has been successful in classic applications such as aviation and marine navigation since it was first developed. Since then, it has become useful for a wide range of people because its capabilities are accessible using small, affordable equipment. What was once available only in very expensive equipment, Cobra Electronics Corporation[™] brings to you with our highquality line of affordable handheld GPS receivers

How GPS Works

GPS uses a global network of 24 satellites that transmit radio signals to earth from high earth orbit. Thankfully for users, the United States has offered free use of the system to the international community. Many international user groups have accepted GPS as the core for an international civil satellite navigation capability.

GPS service provides users with extremely accurate positioning information anywhere on or near the surface of the earth. To accomplish this, each of the 24 satellites emits signals to receivers below. GPS determines location by computing the difference between the time that a signal is sent and the time it is received. GPS satellites carry atomic clocks that provide extremely accurate time information. The time information is placed in the codes broadcast by the satellite so that a receiver can continuously determine the time the signal was broadcast. The signal contains data that your GPS receiver uses to compute the locations of the satellites and to make other adjustments needed for accurate positioning. Your GPS receiver uses the time difference between the time of signal reception and the broadcast time to compute the distance, or range, from the receiver to the satellite. With information about the ranges to four satellites and the location of each satellite when the signal was sent, your receiver can compute its own three-dimensional position: latitude, longitude, and altitude. People think of GPS as having three segments: the control, space and user segments. What follows is a little information about each segment.

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Control Segment

The Control Segment of GPS consists of the Master Control Station, Monitor Stations and Ground Antennas.

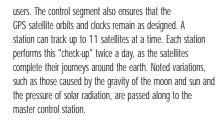
The one master control station, located at Falcon Air Force Base in Colorado Springs, Colorado, USA is responsible for overall management of the remote monitoring and transmission sites. As the center for support operations, it calculates any position or clock errors for each individual satellite, based on information received from the monitor stations. Then it "orders" the appropriate ground antennas to relay the corrective information back to that satellite.

Five monitor stations are located at Falcon Air Force Base in Colorado, Hawaii, Ascension Island in the Atlantic Ocean, Diego Garcia Atoll in the Indian Ocean and Kwajalein Island in the South Pacific Ocean. Each of the monitor stations checks the exact altitude, position, speed and overall health of the orbiting satellites. The control segment uses measurements collected by the monitor stations to predict each satellite's orbit and clock. The prediction data is up-linked, or transmitted, to the satellites for transmission back to the **continued**



GPS GENERAL INFORMATION

ETR



The last of the three pieces of the control segment of GPS are the ground antennas. Ground antennas monitor and track the satellites from horizon to horizon. They also transmit correction information to individual satellites.

Space Segment

The space segment includes the satellites and the Delta rockets that launch the satellites from Cape Canaveral in Florida. GPS satellites fly in circular orbits at an altitude of 10,900 miles (17,500 km) and with a period of 12 hours. The orbits are tilted to the earth's equator by 55 degrees to ensure coverage of the polar regions. Powered by solar cells, the satellites continuously orient themselves to point their solar panels toward the sun and their antenna toward the earth. Each of the 24 satellites, positioned in 6 orbital planes, circles the earth twice a day.

The satellites are composed of three major subsystems: Solar Panels, Internal Components and External Components.

Solar Panels

Each satellite is equipped with solar array panels. These panels capture energy from the sun, which provides power for the satellite throughout its life.

Internal Components

Internal components are subsystems such as atomic clocks and radio transmitters. Each satellite contains four atomic clocks. These clocks are accurate to a nanosecond

or a billionth of a second. The atomic clocks within the satellites are so accurate because even an extremely small time inaccuracy would translate into a extremely large position difference (1/100 of a second inaccuracy translates to a position difference of 1.860 miles to any GPS receiver).

External Components

The exterior of the GPS satellite has a variety of antennas. The signals generated by the radio transmitter are sent to your GPS receiver via L-band antennas. Another component of the satellite is the radio transmitter, which generates the signal. Each of the 24 satellites transmits its own unique code in the signal.

User Segment

You and your GPS receiver are a part of the user segment along with many other private individuals and military personnel and their GPS receivers. Military GPS equipment has been integrated into fighters, bombers, tankers, helicopters, ships, submarines, tanks, jeeps and soldiers' equipment. GPS is also used on Space Shuttles.

Cutting-edge Satellite navigation technology coupled with your GPS receiver can help overcome many of the hardships and hazards associated with recreation. Your GPS receiver allows you to go practically anywhere with confidence knowing precisely where you are at all times. With your GPS receiver, you will be able to record accurately any location and return to that precise spot time and again, any time, anywhere.

Data Field Choices Descriptions

Your GPS 100 S has the ability to display various types of information to you. In order to take advantage of the rich information available to you, it is important that you understand the meaning of certain terms. Below is a list of terms that will aid you in using your GPS 100 S.

Accuracy - the distance within which the unit can accurately locate a position

Avg Speed - average speed throughout the current navigation

Bearing - the direction you are currently heading Date - the current date Destination - the destination is the last point on a route, or the end of a track

Elevation - your current elevation above sea level ETA - Estimated Time of Arrival, based on the average speed you have traveled over the course of your entire route or track Location - your current location shown in degrees/minutes of latitude and longitude

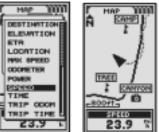
Max Speed - the highest speed that you have traveled during the current navigation

Odometer - total cumulative distance traveled since the last time the odometer was reset

Power - power icon showing power source (external or battery), battery charge level, and backlight On or Off Speed - your current speed **Time** - the current time in your selected time zone Trip Odom - the distance traveled since the last time the trip odometer was reset

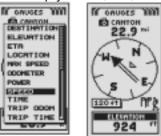
Trip Time - the trip time is the total time that has elapsed during your current navigation since your last reset

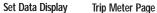
Set Data Display Map Page

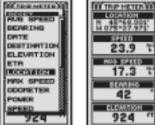


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Gauges Page Set Data Display







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1 POWER Button



2 PAGE Button



3 ZOOM IN/OUT Button



Installing Batteries 1

Your GPS 100 S operates on two standard AA batteries (not included). Always use high-quality alkaline batteries. To install batteries, twist the D-ring connector counterclockwise (anticlockwise) and remove the battery compartment cover. Insert two AA batteries ensuring correct polarity alignment. Replace the battery compartment cover and twist the D-ring clockwise to lock.

As an optional power source, an Automotive Power Adapter (not included, see "Optional Accessories", page 47) can be used with your GPS 100 S.

Using the Buttons

You can access all features of your GPS 100 S by using three buttons. After reading the general explanations below, please refer to "Using the Map Page," page 9, to begin using the buttons to operate your unit.

The POWER Button 1

Pressing and holding the POWER button for 2 seconds will turn the device on or off.

With the unit turned on, pressing and releasing the POWER button will turn on the display backlight. The display will remain lit until no buttons have been pushed for 15 seconds (for more details, see page 31).

The PAGE Button 2

Pressing and releasing the PAGE button allows you to cycle through the five main pages (described in the next section). If you have proceeded to one of the menus (described later in this manual), the PAGE button is an "escape" key, allowing you to exit the menu and return to the main page. At any time, press and hold the PAGE button for 2 seconds to display the Page List menu. From this menu you can go directly to any main page.

The ZOOM IN/OUT Button 3

When a map is displayed, you can use the ZOOM IN/OUT button to zoom in or zoom out on the image of the map. Also, whenever you see a menu of selections, using the ZOOM IN/OUT button allows you to scroll through the selections displayed. A side scroll bar next to a menu indicates that more selections can be viewed by scrolling beyond the bottom or top of the list that is currently visible.

continued

The ENTER Button 4

Pressing and releasing the ENTER button accepts a highlighted selection. The ENTER button can also be used as a Waypoint shortcut. To mark a new waypoint using current location, press and hold the ENTER button for 2 seconds. A confirmation window will pop up.

Turning the Power On 56

To turn on your GPS 100 S, press and hold the POWER button for 2 seconds. A start-up screen appears for a few seconds, followed by a screen that shows that the unit is attempting to lock onto signals from GPS satellites. Once three satellite signals have been acquired, the screen will automatically switch to the Map page and the unit is ready to use. **NOTE:** The unit must be outside with a clear view of the sky to acquire satellite signals for navigation.

To turn the power off, press and hold the POWER button for 2 seconds.

NOTE: When you use the GPS 100 S for the first time, it will take up to approximately 50 seconds to lock on to the GPS satellites.

Powersaver Mode 78

If you wish to save battery power while using just the non-navigational features of your unit, you can turn GPS navigation off. To do so, select "No" and press the ENTER button before the screen automatically changes to the Map page.

In Powersaver Mode, no GPS functions will be available until you turn GPS back on. To do so, please refer to page 33 of this manual.

NOTE: You can turn GPS off at any time. Please see "Turning GPS Off and On," page 33.

4 ENTER Button

BASIC OPERATION



5 Power Button 6 Startup Screen

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7 Enter Button 8 GPS Status

Screen



6

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Navigating with the GPS 100 S

Your GPS 100 S receives signals from Global Positioning System satellites that are in fixed orbits (stationary relative to the ground) around the earth. By acquiring – or locking onto – the signals from at least three satellites, your unit can use triangulation to precisely determine your current position, elevation above sea level and bearing (the direction you are traveling). As you travel, the unit automatically acquires the strongest satellite signals available at your current location. By becoming familiar with the unit's basic operating features, you will be able to use its powerful navigational capabilities.

Waypoint 1

A waypoint is a specific location that you ask the unit to record. In this manual, you will learn how to mark your current location as a waypoint, or set the coordinates for a waypoint anywhere in the world. You can create and store up to 500 waypoints. You can have the unit show you the direction of travel to an individual waypoint, or how to navigate along a series of waypoints.

Track 2

Your GPS 100 S automatically keeps a record of your travel, called a track. The unit shows you a map-like picture of your track. You can create and store up to 10 different tracks. Each track can be recalled and used for navigation as the unit shows you how to retrace the track again, either forward or in the reverse direction. When traveling in unfamiliar territory, this is a quick and easy way to make sure you always know how to get back to your starting point.

Route 3

A route is a series of waypoints which you choose to navigate in a specific sequence. Up to 50 waypoints may be stored in a route. Once you have created a route, your GPS 100 S will guide you from waypoint to waypoint. As you reach each waypoint, the unit automatically begins navigating to the next one.

Trip Meter 4

Along with the navigational features, the trip meter in your GPS 100 S keeps accurate time, allowing it to precisely calculate your speed of travel, average speed throughout your trip and estimated time of arrival (ETA) if you have chosen a destination.

The Five Main Pages

In the following sections of this manual, you will learn how to use five main pages to access all the features of your GPS 100 S:

Map Page 1

The Map page displays a map of your current position in relation to any waypoints that you have selected. It can show you the direction of travel to a selected destination. The Map page also shows you the track that you have traveled along. If you have created a route, the map can show you that route and your current position on it. (See page 9)

Gauges Page 2

The Gauges page displays a compass that shows your current direction of travel or the direction to your next waypoint. The data field currently showing "speed" is user-selectable. (See page 11)

Trip Meter Page 3

The Trip Meter page displays a number of user-selectable fields with information about your current location, the progress you have made, your direction of travel, your speed of travel and the time of your trip. (See page 13)

Nav Data Page 4

The Nav Data page allows you to store and select waypoints for navigation, use the unit's automatic tracking feature and program and recall a route to selected destinations. (See page 15)

System Page 5

The System page allows you to choose the various settings and formats that the unit uses to navigate and display information. (See page 31)

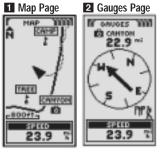
NOTE: Whenever satellite lock is lost or GPS is turned OFF, certain animation icons (below) appear on screen and continue to loop until GPS is ON and/or satellite lock is re-acquired. (See page 41)



Animation sequence that appears when satellite lock is lost



Animation sequence that appears when GPS is turned OFF



3 Trip Meter 4 Nav Data Page Page

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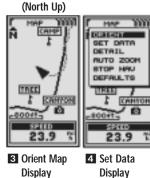
1 Map Page

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MAP PAGE

Using the Map Page

2 Select Options Map Page



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The Map page displays a graphic representation of the navigation currently in progress. Any waypoints, routes or tracks that you are using will be displayed. A black **(**triangle) in the middle points to the direction you are currently traveling. A data field at the bottom of the screen shows you information of your choosing about your position or navigation. You can zoom in and out on the map image by using the ZOOM IN/OUT button. You have a number of options for customizing the display, (details below).

Selecting Options 1 2

From the Map page, press and release the ENTER button to display the Map Page Options menu. Use the ZOOM IN/OUT button to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the ZOOM IN/OUT button again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Orient Option 2 3

Highlight and select ORIENT to designate the orientation of the map display. To make the screen always represent magnetic north, highlight and select NORTH UP (see 1). To make the screen always represent the direction of travel, highlight and select TRACK UP (see 5).

Set Data Option 2 4 5

Highlight and select SET DATA to choose the information about your current position or navigation that you want to be displayed at the bottom of the Map page. Highlight and select FULL MAP to show the entire image of the map currently in use (see **5**). Highlight and select from the following for display at the bottom of the page: Accuracy, Average Speed, Bearing, Date, Destination, Elevation, ETA, Location, Maximum Speed, Odometer, Power, Speed, Time, Trip Odometer, Trip Time (see 1). (For more information about the optional data selections, see "Data Descriptions," page 4)

continued

Map Detail Option 2 6

Highlight and select DETAIL to show/hide any or all of the details to be displayed on the map. These details include names of waypoints, waypoint symbols, your navigational route and travel completed so far (track).*

Auto Zoom Option 2 7

Highlight and select AUTO ZOOM to turn this feature on or off. When this feature is on, the scale of the map adjusts automatically to show the entire navigation currently in progress. When this feature is off, you adjust the scale of the map manually using the ZOOM IN/OUT button.*

Stop Nav Option 2 8

To stop the current navigation (GoTo, Route or Track), highlight and select STOP NAV. Highlight and select YES to stop. Highlight and select NO to make the current navigation continue.*

Defaults Option 2 9

Highlight and Select DEFAULTS to restore all original default Map page settings. Highlight and select YES to restore original settings to map Orientation = North Up; Data field information = Speed; map Details shown = Names, Symbols, Route, Track; Auto Zoom = On. Highlight and select NO to maintain all current settings.

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8 Stop Nav 9 Defaults On/Off On/Off

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*See "Using the Nav Data Page," page 15, to learn about this feature.





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Using the Gauges Page

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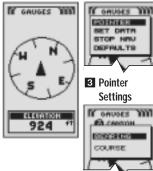
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Gauges Page

The Gauges page displays a compass that indicates direction of travel. It can show the direction you are currently traveling or the direction from your current position to the next waypoint in your navigation.

Selecting Options 1 2

From the Gauges page, press and release the ENTER button to display the Gauges Page Options menu. Use the ZOOM IN/OUT button to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the ZOOM IN/OUT button again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Pointer Options 2 3 4 5 6 7

Highlight and select POINTER to designate the compass display information about your course 3. Highlight and select BEARING to make the compass indicate the direction to your next waypoint 4. Highlight and select COURSE to make the compass indicate direction to your next waypoint with arrows that show if you are on course 7 or left 6 or right 5 of course. This display also shows how many feet or meters off course you are currently.* continued

Set Data Option 2 8 9

Highlight and select SET DATA to choose information about your current position or navigation that you want displayed at the bottom of the Gauges page. You may highlight and select from the following: Accuracy, Average Speed, Bearing, Date, Destination, Elevation, ETA, Location, Maximum Speed, Odometer, Power, Speed, Time, Trip Odometer, Trip Time. (For more information about the optional data selections, see "Data Descriptions," page 4)

Stop Nav Option 2 10

To stop the current navigation (GoTo, Route or Track), highlight and select STOP NAV. Highlight and select YES to stop. Highlight and select NO to make the current navigation continue.*

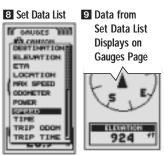
Defaults Option **2 11**

Highlight and Select DEFAULTS to restore all original default Gauges page settings. Highlight and select YES to restore original settings to Pointer = Bearing; Data field information = Speed. Highlight and select NO to maintain all current settings.

*See "Using the Nav Data Page," page 15, to learn about this feature.

GAUGES PAGE

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TRIP METER PAGE

Using the Trip Meter Page

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1 Trip Meter Info 2 Option Settings



3 Reset Values

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Trip Meter Page

The Trip Meter page displays information about your current position, the navigation in progress and other available data. It can display up to 5 fields that you can select from a total of 15 choices.

Selecting Options 1 2

From the Trip Meter page, press and release the ENTER button to display the Trip Meter Page Options menu. Use the ZOOM IN/OUT button to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the ZOOM IN/OUT button again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Reset Option 2 3

Highlight and select RESET to reset any or all of the Trip Meter values to 0. Highlight and select ALL to reset all values to 0, or highlight and select individual values: Maximum Speed, Average Speed, Trip Odometer, Trip Time, Odometer, Track Log.

Font Size Option 2 4 5

Highlight and select FONT SIZE to increase or reduce the size of the text displayed in each field. Highlight and select SML 5-FIELD for smaller text with 5 data fields displayed or highlight and select LRG 3-FIELD for larger text with 3 data fields displayed.

NOTF: The lower two fields from 5-field screen will be hidden when switching to 3-field.

continued

Set Data Option 2 6

Highlight and select SET DATA to choose the fields you want displayed on the Trip Meter page. (Highlight and select the field you want to change the highlighted field will blink - then highlight and select the new field from the menu.) Menu includes: Accuracy, Average Speed, Bearing, Date, Destination, Elevation, ETA, Location, Maximum Speed, Odometer, Power, Speed, Time, Trip Odometer, Trip Time. (For more information about the optional data selections, see "Data Descriptions," page 4)

Stop Nav Option 2 7

To stop the current navigation, highlight and select STOP NAV. Highlight and select YES to stop. Highlight and select NO to have current navigation continue.*

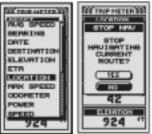
Defaults Option 2 8

Highlight and Select DEFAULTS to restore all original default Trip Meter page settings. Highlight and select YES to restore original settings to Font Size = Small 5-Field; Data field information = Location, Speed, Trip Odometer, Odometer, Maximum Speed. Highlight and select NO to maintain all current settings.



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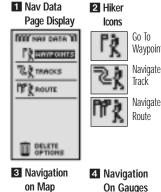


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*See "Using the Nav Data Page." page 15, to learn about this feature.



Using the Nav Data Page



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Nav Data Page

The Nav Data page gives you access to the powerful navigational features of your GPS 100 S. From this page, you can create and store up to 500 waypoints. For each one, you can choose a name and assign a symbol. Using the navigational features, you can ask the unit to show you the "GoTo" direction of travel to reach a selected waypoint.

You can also create and store up to 10 tracks. Your GPS 100 S automatically keeps a record of your progress as you travel and gives you a graphic representation of the track you have taken. You can have the unit guide you in the reverse direction along the same track.

You can select two or more waypoints to create a route. Your GPS 100 S will then show you the way to follow the route accurately.

2 Whenever navigation is in progress, a hiker icon will appear in the lower right hand corner of the Map Page and Gauges Page 3 4.

Waypoints

When you select WAYPOINTS from the Nav Data page, (see **1**), your GPS 100 S will display a list of the waypoints currently stored. You can create, save and recall up to 500 waypoints. If you want to change the location for a waypoint, its location coordinates can be edited. You can ask the unit to show you the "GoTo" direction of travel to reach any waypoint vou select.

5 Select Stored 6 View Waypoints Direction



NOTE: You can store up to 50 waypoints into a route. **NOTE:** You can record your current location as a waypoint at any time

simply by pressing the ENTER button for 2 seconds, or by following the procedure described on page 16, under "New Option."

Selecting Options 1

From the Nav Data Page, highlight using the ZOOM IN/OUT button and select WAYPOINTS by pressing the ENTER button. Use the ZOOM IN/OUT button to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the ZOOM IN/OUT button again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

continued

Select Option 5 6 7 8 9

Highlight and choose SELECT to access any waypoint on the list. Highlight and select GOTO to return to the Map page to navigate to the selected waypoint (see "GoTo a Selected Waypoint," page 18). Highlight and select EDIT to change the name, symbol, location coordinates or elevation of the selected waypoint **7**. Highlight and select DELETE to delete the selected waypoint 8. Highlight and select PREVIEW to view a graphic representation of the selected waypoint from your current location **9**. The image can be zoomed in and out.

New Option 5 10

Highlight and select NEW to add a new waypoint to the list. Highlight and select MARK CURRENT to save the coordinates for your current location as a waypoint. The default name (a 3-digit number) and symbol (a flag) will be assigned. You can either accept the default name and symbol or rename and change the symbol of the waypoint (see "Editing Text", page 29). (You can use Waypoints/Select/Edit to change them later.) Highlight and select ENTER MANUAL to enter the location coordinates for a wavpoint manually (see "Editing Text," page 29). Entering an elevation is optional. The default name (a 3-digit number) and symbol (a flag) will be assigned. (You can use Waypoints/Select/Edit to change them later.)

Waypoint shortcut: To mark a new waypoint using current location, press and hold the ENTER button for 2 seconds. A confirmation window will pop up.

Sort Option 5 11

Highlight and select SORT to sort the list of waypoints according to name, symbol, nearest waypoint or most recently saved waypoint. Highlight and select NAME to sort waypoints in alphabetical order by name. Highlight and select SYMBOL to have waypoints with that symbol displayed first (waypoints with the same symbol are sorted alphabetically). Highlight and select NEAREST to have waypoints sorted by distance from your current location, with the nearest listed first. Highlight and select MOST RECENT to sort waypoints according to when they were saved, with the most recent listed first (see "Sort or Search," page 30).

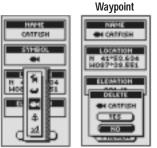
Search Option 3 12

Highlight and select SEARCH to search the list of waypoints for a name that you entered. Press the ENTER button to begin entering the name you want to search (see "Editing Text," page 29). The name of the waypoint containing the letters you entered is highlighted on the list (see "Sort or Search," page 30)



Waypoints: Summary





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11 Sort List of 12 Search Existing Waypoints Waypoint List

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Waypoints: Creating New

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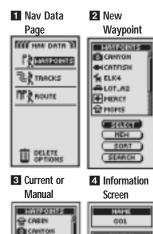
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6 Return to Nav

Data Page

page



Creating a New Waypoint

To mark your current location as a new waypoint:

- Waypoint shortcut: To mark a new waypoint using current location, press and hold the ENTER button for 2 seconds. A confirmation window will pop up.
- 1. From the Nav Data Page, highlight using the ZOOM IN/OUT button and select WAYPOINTS by pressing the ENTER button **1** Highlight and select NEW 2.
- 2. Highlight and select MARK CURRENT 3. The waypoint information screen appears **4**. A default name (a 3-digit number) and symbol (a flag) will be assigned. You can either accept the default name and symbol or rename and change the symbol of the waypoint (see "Editing Text", page 29).
- **3.** When you have finished editing your new waypoint, select SAVE **4** to return to the main Nav Data page 1. To return to the main Nav Data Page without saving the new waypoint, press the PAGE button 6.

To enter any location as a new waypoint manually:

1. From the Nav Data Page, highlight using the ZOOM IN/OUT button and select WAYPOINTS by pressing the ENTER button **1** Highlight and select NEW 2

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- 2. Highlight and select MANUAL 3. The waypoint information screen appears **5**. A default name (a 3-digit number) and symbol (a flag) will be assigned. You can either accept the default name and symbol or rename and change the symbol of the waypoint (see "Editing Text," page 29). The Location field will blink.
- **3.** Enter the location (latitude and longitude) of your new waypoint, (see "Editing Text," page 29).
- **4.** Highlight Elevation, the field will blink. Enter the location's elevation (see "Editing Text," page 29).

NOTE: ELEVATION does not need to be entered to save your new waypoint.

5. When you have finished editing your new waypoint, select SAVE 4 to return to the main Nav Data page 1. To return to the main Nav Data Page without saving the new waypoint, press the Page button **6**.

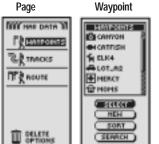
"GoTo" a Selected Waypoint

To make the map show the navigational path to a selected wavpoint:

- **1.** From the Nav Data Page, highlight using the ZOOM IN/OUT button and select WAYPOINTS by pressing the ENTER button **1**. Highlight and select SELECT 2.
- 2. Highlight and select the waypoint you want to navigate or "GoTo" 3. The waypoint information screen for that waypoint appears with four selections: GoTo, Edit, Delete and Preview 4.
- **3.** Highlight and select GOTO to navigate to your selected waypoint **4**. This will bring up the Map page with the GoTo path between your current position and the selected "GoTo" waypoint 5.

NOTE: You can Preview the selected waypoint's location on the map by selecting PREVIEW in the waypoint information screen. Selecting OK in the Preview screen will return you to the waypoint information screen.

While in the Gauges Page, a navigation or "GoTo" is illustrated by a flag and hiker icon in the bottom right hand corner of the screen. Also, your selected GoTo wavpoint and distance to that wavpoint are shown above the compass 6.

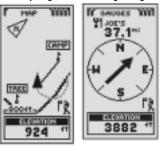


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Map Page Gauges Page





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Tracks: Summary

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Tracks

When you select TRACKS from the Nav Data page (see 1), your GPS 100

NOTE: Your GPS 100 S automatically begins tracking your travel whenever it is turned on and linked to satellites. It keeps the recorded travel stored in its log even when the power is turned off, starting a new tracking "session" when it is turned back on. Old tracks will remain in memory (2,000 tracking points) unless erased by user (see "Deleting Individual Tracks,"

Selecting Options 1 2

From the Nav Data page, highlight using the ZOOM IN/OUT button and select TRACKS by pressing the ENTER button to display the Tracks screen. Use the ZOOM IN/OUT button to scroll through the list of tracks, then press the ENTER button to go to the highlighted track. Use the ZOOM IN/OUT button again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Log Option 2 3 4 5

Highlight and select LOG to save the current track or scroll to recall a track saved previously 2. Highlight and select SAVE 3 to save either THIS SESSION 4 (the travel recorded since the unit was last turned on) or the ENTIRE LOG 4 (all travel recorded since the log was last cleared) (see CLEAR below). You can either accept the default name (the current date) or rename the track before saving **5** (see "Editing Text," page 29). Highlight and select CLEAR **3** to clear the log of all travel that has been recorded. The unit automatically restarts recording your travel.

Select Option 2 6 7 8 9

8 Enter Name 9 Delete DOLETE 20011-2.5EP-18-01 ENTER HARE - 15 308-00-01 CITRE C STATES /

S will display a list of the tracks currently stored. Your unit will automatically record a track as you travel. You can store up to 10 tracks and later recall any of those tracks to use for navigation. Your unit can guide you along a selected track in either direction.

page 28).

Highlight and select any stored track for navigation, renaming or deletion **2**. Highlight and select NAVIGATE 6 and then FORWARD or REVERSE 7 to display the map page showing you the direction to travel to follow on the selected track. Highlight and select RENAME 6 to change the name of a selected track **8** (see "Editing Text," page 29). Highlight and select DELETE 6 to delete the selected track 9.

Navigate a Selected Track

To make the map show the navigational path along a selected track:

- **1.** From the Nav Data Page, highlight using the ZOOM IN/OUT button and select TRACKS by pressing the ENTER button 1.
- **2.** Highlight and select the track you want to navigate **2**. A map of the selected track appears with three selections: Navigate, Rename and Delete 3
- 3. Highlight and select NAVIGATE to navigate through your selected track **3**. Highlight and select FORWARD to navigate from the beginning to the end of the selected track **4**. Highlight and select REVERSE to navigate from the end to the beginning of the selected track 4.

4. This will bring up the Map page with the track path shown **5**.

While in the Gauges Page, Track navigation is illustrated by a curved double line and hiker icon in the bottom right-hand corner of the screen. Also, your selected track and distance to complete the navigation of that track are shown above the compass 6.



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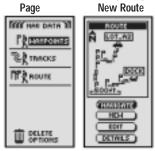
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6 Editing

Routes: Summary

2 Designating Route



When you select ROUTE from the Nav Data page (see **1**), you can use your GPS 100 S to designate a route consisting up of to 50 waypoints. The unit will then guide you along the route. As you reach each waypoint, the unit will automatically begin pointing you to the next waypoint, until you reach your final destination.

Selecting Options 1 2

From the Nav Data page, highlight using the ZOOM IN/OUT button and select ROUTE by pressing the ENTER button to display the Route screen. Use the ZOOM IN/OUT button to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the ZOOM IN/OUT button again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Navigate Option 2 3

Highlight and select NAVIGATE to make your GPS 100 S guide you along a route you have created (see "New Option" below). Highlight and select FORWARD to navigate forward along a route from start to end point or highlight and select REVERSE to navigate in a reverse direction from end point to start point.

New Option 2 4

Highlight and select NEW to create a new route. When the OVERWRITE EXISTING? screen appears, highlight and select YES to create your new route (see "Creating A New Route," page 22) or NO to cancel creation of a new route.

Edit Option 2 5 6

Highlight and select EDIT to add or delete any waypoints you have selected in creating a new route. On the Edit screen highlight and select REMOVE to delete a waypoint, INSERT to insert a waypoint or DONE to save changes and return to Route screen 6.

Details Option 2 7

Highlight and select DETAILS to see any or all of the waypoints of a specific route you have planned. Highlight and select OK to return to main Nav Data page.

Creating a New Route

To create a new route consisting of up to 50 wavpoints:

- **1.** From the Nav Data page, highlight using the ZOOM IN/OUT button and select ROUTE **1**, by pressing the ENTER button. Highlight and select NEW 2. A screen displaying OVERWRITE EXISTING? appears 3.
- 2. Highlight and select YES 3. A blank NEW ROUTE list appears with the first field already highlighted **4**.
- **3.** Select that blank field **4**. A list of all the waypoints you currently have stored appears **5**.
- **4.** Highlight and select SELECT **5**. Highlight the waypoint you want to put into your route. You can sort or search the list (see "Sort" and "Search." page 16).

continued

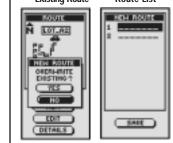


Routes: Creating New

2 Route Page 1 Nav Data Page



3 Overwrite 4 Display New Existing Route Route List



5 Display







Routes: Creating New

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8 Change Waypoint





Creating a New Route (continued)

5. Select the highlighted waypoint to add it to to your route **6**. The New Route list appears with the added waypoint displayed **7**.

Use the ZOOM IN/OUT button to highlight the next blank field. Repeat steps 3 to 5 to add more waypoints.

6. When you have finished adding waypoints to your route, press the PAGE button to return to the main Nav Data page 9

Insert/Remove Waypoints in Route 8

To insert a waypoint into the route, highlight and select the waypoint that will come immediately before the one you want to add. Highlight and select INSERT **8**. When the list of all waypoints appears, select the waypoint to insert as you did in **5**, **6** and **7** above.

To remove a waypoint in the route, highlight and select the waypoint you want to remove. Highlight and select REMOVE 8. Your New Route list will automatically be updated to reflect the waypoint removal.

Inserting a Waypoint into a Route To add a waypoint to an existing route:

1. From the Nav Data page, highlight using the ZOOM IN/OUT button and select ROUTE by pressing the ENTER button **1**. Highlight and select EDIT **2**. The Edit Route list of waypoints in your route appears **3**.

2. Highlight and select the waypoint that will come immediately before the one you want to add 3. An EDIT menu appears 4.

3. Highlight and select INSERT **4**. A list of all waypoints appears **5**.

- **4.** Highlight and select SELECT **5**. Highlight the waypoint you want to add to your route. If you wish, you can sort or search the list (see "Sort" and "Search," page 16).
- **5.** Select the highlighted waypoint to add it to your Route **5**. The Edit Route list appears with the added waypoint displayed.

Repeat the previous steps if you wish to add more waypoints to your route.

6. When you have finished adding waypoints to your route, select DONE to return to the main Nav Data page 6.



Routes: Inserting a Waypoint

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9 LOT_A2	9 LOT_R2

5 Highlight 6 Return To Nav





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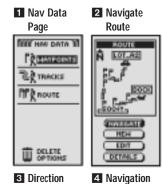
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Routes: Navigation



Navigate a Selected Route

To make the map show the navigational path along the route:

1. From the Nav Data Page, highlight using the ZOOM IN/OUT button and select ROUTE by pressing the ENTER button **1**. A map of the selected route appears with four selections: Navigate, New, Edit and Details 2.

2. Highlight and select NAVIGATE to navigate through your selected route **2**. Highlight and select FORWARD to navigate from the beginning to the end of the selected route **3**. Highlight and select REVERSE to navigate from the end to the beginning of the selected route 3.

3. This will bring up the Map page with the route path shown **4**.

NOTE: You can view the list of waypoints in the route by selecting DETAILS in the route options screen. Selecting OK in the Details screen will return you to the route options screen.

While in the Gauges Page, Route navigation is illustrated by a group of flags and hiker icon in the bottom right-hand corner of the screen. Also, the next waypoint on your route navigation and the distance to that waypoint are shown above the compass 5.

Delete Options

When you select DELETE OPTIONS from the Nav Data page (see 1), you can delete waypoints, tracks or routes that you have created or delete all data currently stored.

Selecting Options 1 2

From the Nav Data page, highlight and select DELETE OPTIONS to display the Delete Options screen. Use the ZOOM IN/OUT button to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the ZOOM IN/OUT button again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Waypoints Option 2 3

Highlight and select WAYPOINTS if you wish to delete any or all of the waypoints you have stored. Highlight and select ONE-BY-ONE to delete waypoints one at a time (see "Deleting Individual Waypoints," page 27). Highlight and select ALL to delete all waypoints currently stored.

Tracks Option 2 3

Highlight and select TRACKS if you wish to delete any or all of the tracking sessions currently in memory. Highlight and select ONE-BY-ONE to delete track sessions one at a time (see "Deleting Individual Tracks," page 28). Highlight and select ALL to delete all tracks currently in memory.

Route Option 2 4

Highlight and select ROUTE if you wish to delete the route you currently have stored. Highlight and select DELETE - YES and the entire route will be deleted. Highlight and select DELETE – NO to cancel the delete function.

All Option 2 5

Highlight and select ALL if you wish to delete all waypoints, tracks and the route you currently have stored. Highlight and select DELETE ALL NAV DATA -YES and the data will be deleted. Highlight and select DELETE ALL NAV DATA NO to cancel the delete function.

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Deleting Individual Waypoints

To delete selected waypoints one at a time:

- **1.** From the Nav Data page, highlight using the ZOOM IN/OUT button and select DELETE OPTIONS by pressing the ENTER button 1. The Delete Options menu appears 2.
- 2. Highlight and select WAYPOINTS 2. The Delete menu appears 3.
- 3. Highlight and select ONE-BY-ONE 3. A list of all waypoints currently stored appears 4. You can sort or search the list (see "Sort" and "Search," page 16).
- **4.** Highlight and select SELECT. The first waypoint is highlighted **4**.
- 5. Highlight the waypoint you wish to delete 4. A Delete Confirmation menu appears 5.
- 6. Highlight and select YES **5** and the list of all waypoints appears with the selected waypoint deleted 6. Highlight and select NO 5 to return to the list of all waypoints currently stored **4**. Highlight and select DONE 5 to return to the main Nav Data Page 1.

Repeat steps 5 and 6 to delete other waypoints.

7. When you have finished deleting, press the PAGE button to return to the main Nav Data page **7**.

Deleting Individual Tracks

To delete selected tracks one at a time:

- 1. From the Nav Data page, highlight using the ZOOM IN/OUT button and select DELETE OPTIONS by pressing the ENTER button 1. The Delete Options menu appears 2.
- 2. Highlight and select TRACKS 2. The Delete menu appears 3.
- **3.** Highlight and select ONE-BY-ONE **3**. A list of all saved tracks appears **4**.
- **4.** Highlight and select the track you wish to delete **4**. A Delete Confirmation menu appears 5.
- **5.** Highlight and select YES **5** and the list of all tracks will appear with the selected track deleted 6. Highlight and select NO 5 to return to the tracks list **4**. Highlight and select DONE **5** to return to the main Nav Data Page 1.

Repeat steps 4 and 5 to delete other tracks.

6. When you have finished deleting, press the PAGE button to return to the main Nav Data page **7**.

1 Delete	2 Access
Track	Delete Menu
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NAV DATA PAGE

Delete Options: Individual Tracks

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5 Confirm 6 View Revised









2 Highlighting

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Editing Text

3 Access Menu 4 Next Character

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5 Accept New

Character

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24

1 Use ZOOM

IN/OUT

Button

Editing Text

To enter or change the information displayed or enter information into a search field for a waypoint, track or route, use the following procedure:

- 1. From any screen that allows you to enter letters, numbers or symbols (names of waypoints/tracks/routes, dates, etc.), use the ZOOM IN/OUT button to scroll to the field you want to edit and press the ENTER button 1
- 2. Highlight the space where you want to insert a letter or symbol, or the character you want to change **2**. Press the ENTER button to bring up a pop-up menu showing the characters to choose from **3**.
- **3.** Scroll through the characters until the one you want is highlighted **3**. Press the ENTER button to select it. The new character appears in place and is highlighted.
- **4.** Press the ENTER button again to accept the new character **5**. The character next to it will be highlighted 4.
- Repeat the same procedure to change the next character if desired. Press the ZOOM IN/OUT button to skip characters you do not want to change.
- To clear a selected character and all characters that follow it, highlight the Backspacer symbol (at the end of the menu) **6**. Press the ENTER
- **5.** When you have finished entering or changing all characters, press the ENTER button. Highlight the Down character (at the beginning of the menu) and press the ENTER button 7.

want to edit and follow the same procedure to enter or change characters.

7 Highlight "Down" Character

K

If necessary, use the ZOOM IN/OUT button to scroll to the next field you

Sort Option

1. From any screen with the SORT option, highlight and select SORT 1.

- 2. Choose from the following choices:
- Alphabetically by name:
- a. The list of waypoints and 4 options will be presented: NAME, SYMBOL, NEAREST, MOST RECENT. Highlight and select NAME 2.
- By a chosen symbol (with the selected symbol listed first and waypoints with the same symbol sorted alphabetically):
- **a.** The list of waypoints and 4 options will be presented: NAME, SYMBOL, NEAREST, MOST RECENT. Highlight and select SYMBOL 2.
- **b.** A list of waypoint symbols appears. Highlight and select the symbol you want at the top of the list 3.
- Nearest waypoint to your current location:
- **a.** The list of waypoints and 4 options will be presented: NAME, SYMBOL, NEAREST, MOST RECENT. Highlight and select NEAREST 2.
- According to when they were saved with the most recently saved waypoint listed first:
- a. The list of waypoints and 4 options will be presented: NAME, SYMBOL, NEAREST, MOST RECENT. Highlight and select MOST RECENT 2.
- 3. The waypoint list appears sorted. Continue your pervious activities.

Search Option

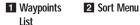
To search any list of waypoints for a particular name: **1.** From any screen with the SEARCH option, highlight and select SEARCH **1**.

2. Select (by pressing the ENTER button) the highlighted blank space to enter the first letter of the name you are searching for (see "Editing Text," page 29) 4

- **3.** The waypoints containing that letter first appear at the top of the list.
- Continue to enter letters into the blanks until the waypoint you are searching for appears highlighted at the top of the list **5**.
- Accept the current highlighted waypoint. Scroll to select the waypoint you are searching for.

4. Continue your previous activities.







3 Symbols List 4 Search

-	
NAME ALE	SELECT

30

5 Choosing Your

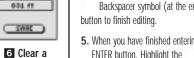








A B





SYSTEM PAGE

Using the System Page

On/Off

Display

Settings

Settings

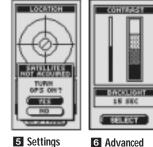
WHERE S

1 System Page

TIME SYSTEM 1 LOCATION - 四日 2 ESTITUTES DISPLAY -64 TI SETTINGS A+ HOWHICED Di About LOCK DEPHULTS Non-Freedom O H09-23-01 CONSTRUCT

3 Access 4 Adjust

Navigational Features



GLOCK FORMET

2 Turn GPS System Page 1 Navigation

The System page gives you various options for changing the system settings used by your GPS 100 S. From this page you can turn GPS navigation on and off and adjust settings for features such as display, sounds, time, compass, map, method of navigation, activate WAAS, change map datum, etc.

Selecting Options 1

From the System page, use the ZOOM IN/OUT button to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the ZOOM IN/OUT button again to highlight your choice, then press the ENTER button to select it. Use the PAGE button to back up to the main page.

Satellites 1 2 3

To turn GPS navigation on and off, highlight and select SATELLITES, (see "Turning GPS On and Off," page 33). Highlight and select GPS MODE. Highlight and select YES or NO in response to the prompt to access your unit's navigational features or to disable your unit's navigational features. (Turning GPS mode off preserves battery power.)

Display Options 1 4

To adjust the display Contrast and Backlight settings, highlight and select DISPLAY, (see "Adjusting the Display," page 34). Highlight and select CONTRAST to increase or decrease the display contrast. Highlight and select BACKLIGHT to designate the duration of time the backlight will stay lit.

Settings Option 1 5

Highlight and Select SETTINGS to change the following system settings: Clock Format, Time Zone, Daylight Saving, Language, Units, Sounds (see "Using the Settings Screen," page 35).

Advanced Option 1 6



Highlight and Select ADVANCED to change the following advanced operational parameters used by your unit: WAAS, Compass, Map Datum, Position Format, North Reference, Battery Saver (see "Using the Advanced Screen," page 37).

About Option 1 7

Highlight and select ABOUT to display certain system information. Information displayed includes: percentage of memory used; unit serial number, software version and applicable patent numbers.

Defaults Option 1 8

Highlight and Select DEFAULTS to restore all original default settings for the entire GPS 100 S system. Highlight and select YES to restore original settings (see chart below). Highlight and select NO to maintain all current settings.

System Page De	faults		
	12 Hour Current Location Auto English	Function Sounds WAAS Compass Map Datum Position Format North Reference Battery Saver	
Gauges Defaults			
Function	Default	Function	Default
Pointer	Bearing	Data Field	Speed
Map Page Defau	lts	Trip Meter Def	faults
Function Orient	Default North Up	Function Data Field	Default <u>5 Fields</u> *
Data Field Details Shown	Speed Names (show) Symbols (show) Route (show) Track (show)		Location Speed Trip Odom Odometer Max Speed
Auto Zoom	On	Data Field	<u>3 Fields</u> Location Speed Trip Odom

Status Bar Indicator 9 1

The status bar at the bottom of the System page updates information automatically. You can see whether the backlight is on or off, as well as the current date and time. You can also determine the present status of the battery as the battery symbol increases the amount of black from the top down as it discharges.

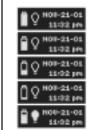


Using the System Page

7 Access	8 Access
About	Defaults
Option	Option
MIN SYSTEM 1	NOOT SYSTEM
48	DEFRUITS



9 Status Bar

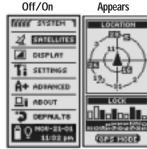






GPS Off/On

1 Turning GPS 2 Location Screen Off/On



4 Stop

Receiving

LOCATION

LOCK

GPS HODE

System Page

page

3 Use with

GPS Off?

LOCATION

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NO

TAXABLE PARTY.

5 Turn GPS On? 6 Return to

Turning GPS Off and On

When indoors, you can turn GPS navigation off, allowing you to use the non-navigational features of your GPS 100 S while preserving battery power. When you turn GPS off, the unit stops searching for signals from satellites. When you turn GPS back on to receive signals, the unit must re-acquire signals from at least three satellites before it can begin navigation.

NOTE: The unit must be outside with a clear view of the sky to acquire satellite signals for navigation.

To turn GPS off:

- **1.** From the System page, highlight using the ZOOM IN/OUT button and select SATELLITES by pressing the ENTER button 1. A LOCATION screen appears, showing the satellite signals being received with the signal strength of each indicated. The satellites that are currently acquired by the unit for navigation are highlighted 2.
- 2. Select GPS MODE 2. "USE WITH GPS OFF?" menu will appear 3.
- **3.** Highlight and select YES **3**. The unit will immediately turn GPS off and stop receiving satellite signals.

4. Press the PAGE button to return to the System page **6**.

To turn GPS on:

1. From the System page, highlight using the ZOOM IN/OUT button and select SATELLITES by pressing the ENTER button **1**. A blank LOCATION screen appears 4.

2. Select GPS MODE 2. "TURN GPS ON?" menu will appear 5.

3. Highlight and select YES 5. Unit will begin searching for satellite signals until it locks on to three of them.

4. Press the PAGE button to return to System page 6.

NOTE: The unit must be outside with a clear view of the sky to acquire satellite signals for navigation.

Adjusting the Display

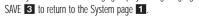
You can adjust various settings for your unit's display.

- **1.** From the System page, highlight using the ZOOM IN/OUT button and select DISPLAY by pressing the ENTER button **1**. CONTRAST and BACKLIGHT appear 2.
- 2. SELECT will be highlighted 2. To adjust contrast or backlight settings, press the ENTER button. Contrast field will begin to blink 3.
- **3.** Choose from the following. You only need to select the settings you want to change.
 - Contrast

Highlight and select CONTRAST 3. Using the ZOOM IN/OUT button you will now be able to change the contrast of the display screen **4**. Press the ENTER button to complete your CONTRAST adjustment.

- Brightness
- Highlight and select BACKLIGHT **3**. This will allow you to change the length of time the screen's backlight remains lit each time the unit is turned on. (Once you have selected BACKLIGHT, the title of the selected field will begin to blink.) Press the ENTER button to activate the TIME OUT menu **5**. Highlight and select the time interval vou want.

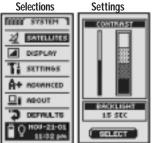
WARNING: If you choose STAY ON, battery life will significantly decrease. 4. When you have finished changing display settings, highlight and select





Adjusting the Display







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BACKLIGHT 15 SEC	BACKLIGHT 15 SEC
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Backlight



LOCATION



2.5 SYSTEM PAGE

Setting Screen

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24 HOUR

1 Change Settings

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3 First Data

DE ABOUT

2 SATELLITES

2 Select Data Using the Settings Screen

From the Settings screen, you can change the various settings listed below.

To change settings:

- **1.** From the System page highlight, using the ZOOM IN/OUT button and select SETTINGS by pressing the ENTER button **1**. A listing appears with SELECT highlighted **2**.
- **2.** Press the ENTER button and the title of the first data field will begin to blink **3**. Highlight field you wish to change (highlighted field will blink).
- **3.** Choose from the following. (You only need to select the settings you want to change.)

Clock Format

To change the format of the time display, highlight CLOCK FORMAT **3**. Press the ENTER button to bring up the menu and select 12 HOUR or 24 HOUR 4.

• Time Zone

To choose the time zone you want the clock to use, highlight TIME ZONE 3. Press the ENTER button to bring up the menu of major cities. Select USE CURRENT LOCATION or the city that is in the desired time zone **5**, (see page 40 for World City Time Zone chart).

continued

Daylight Saving

To have the clock use daylight saving time (Summer Time), highlight DAYLIGHT SAVING 3. Press the ENTER button to bring up the menu. Select AUTO to make the clock switch to daylight saving time (Summer Time) automatically. Select ON to switch manually back to daylight saving time (Summer Time). Select OFF to switch manually the clock to standard time (Winter Time (GMT)) 6.

• Language

To choose the language used for the display, highlight LANGUAGE 3. Press the ENTER button to bring up the menu of languages. Select from the following English, Dutch, French, German, Italian, Portuguese, Spanish or Swedish 7.

• Units

To choose the system for measuring distance, select UNITS 3. Press the ENTER button to bring up the menu. Select ENGLISH, METRIC or NAUTICAL 8.

Sounds

To turn the unit's sound on or off, select SOUNDS **3**. Press the ENTER button to bring up the menu. Select ON or OFF 9.

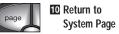
4. To save the changes made, highlight and select SAVE 3. To exit this function without saving changes, press the PAGE button 10.



Savings	Options
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8 Measurement 9 Sound On/Off

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DIGLISH	EHEL28H
OH	OH
(SINE)	SAVE





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4 WAAS On/Off

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Advanced Screen

1 Change 2 Select Data Fields Parameters TOOL SYSTEM

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Field Blinks

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DE ABOUT

3 First Data

Using the Advanced Screen

From the Advanced screen, you can change the advanced operational parameters used by your GPS 100 S.

To change advanced parameters:

- **1.** From the System page, highlight using the ZOOM IN/OUT button and select ADVANCED by pressing the ENTER button **1**. A menu of advanced parameters appears. SELECT will be highlighted 2.
- 2. Press the ENTER button and the title of the first data field will begin to blink **3**. Highlight field you wish to change (highlighted field will blink).
- **3.** Choose from the following. (You only need to select the settings you want to change.)

• WAAS

To turn the unit's WAAS receiver on or off, highlight WAAS 3. (See "What is WAAS," page 42.) Press the ENTER button to bring up the menu. Select ON or OFF 4.

Compass

To change the method of indicating direction used by the compass, highlight COMPASS **3**. Press the ENTER button to bring up the menu. Select CARDINAL (standard N-S-E-W), DEGREES (<0°-360°) or MILS (0000-6400) 5.

Map Datum

To change the datum used by your unit when comparing information with a paper map or other navigational reference, highlight MAP DATUM 3, (see "What is a Map Datum?," page 42, for details). Press the ENTER button to bring up the menu. Select the map datum that matches the item you are comparing 6.

NOTE: Most widely used datum is WGS 84

continued

Position Format

To change the format the device uses to display location coordinates, highlight POSITION FORMAT 3. Press the ENTER button to bring up the menu select from the following: hddd.ddddo° (degrees, decimal degrees), hddd°mm.mm (degrees, minutes, decimal minutes), hddd°mm'ss.s (degrees, minutes, seconds, decimal seconds), British Grid, Dutch Grid, Finnish KK127 Grid, German Grid, Irish Grid, Maidenhead, MGRS (Military Grid Reference System), New Zealand, Qatar Grid, Swedish Grid, Swiss Grid, Taiwan Grid, User Defined Grid, User Defined Grid, UTM/UPS (Universal Transfer Mercator/Universal Polar Stereograph), W Malaysian R **7**.

North Reference

To change the unit's method of orientation to the earth's magnetic field, highlight NORTH REFERENCE 3 (see "About North Reference," page 42). Press the ENTER button to bring up the menu. Select TRUE for true north, MAGNETIC for magnetic north or GRID for grid north 8.

Battery Saver

To conserve battery life, highlight BATTERY SAVER 3. Press the ENTER button to bring up the menu. Select ON or OFF 9.

4. To save changes made, highlight and select SAVE 3. To exit this function without saving changes, press the PAGE button 10.

SYSTEM PAGE **Advanced Screen**

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7 Location 8 Set



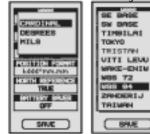


9 Set Interval 10 Return to System Page











SATELUTES

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HANNHING TRACK LOG

FULL!

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MARNING

BATTERJES LOH!

NOTICE

OPS IS OFF

CURRENT POSITION IS UNKNOWN

TURN GPS ON?

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2 ARRIVING AT

3 CAN'T

CREATE

4 TRACK LOG

5 TRACK

LOG FULL!

6 BATTERIES

LOW!

7 GPS IS

OFF!

ALMOST FULL!

WAYPOINT

DESTINATION!

Alerts

As you use your GPS 100 S, you may see the following alert messages.

1 LOST SATELLITES CONTINUE SEARCHING? You will see this alert if, for any reason, satellite lock is lost. When you see this

message, the unit is automatically trying to re-acquire satellite signals. If you do nothing, the unit will continue to search for signals and the message will disappear when satellite lock is regained. You can select YES to continue searching and clear the alert message. If satellite lock is not regained within 5 minutes, the alert will reappear. You can select NO to turn off GPS navigation and clear the message.

2 NOTICE ARRIVING AT DESTINATION!

If you are navigating to a waypoint, or along a track or route, you will see this message when you are within 500 feet (150 m) of your destination. Select OK or the PAGE button to clear the message.

3 CAN'T CREATE WAYPOINT WAYPOINT LIST FULL!

You will see this message if you try to save a waypoint when the list is full (you can save a maximum of 500 waypoints). Select OK or the PAGE button to clear the message. You will continue to see the message when trying to save a waypoint until you delete one or more waypoints from memory (see page 26).

4 WARNING TRACK LOG ALMOST FULL!

This message appears when the track log memory bank is 90% full. Select OK or the PAGE button to clear the message. The message will reappear each time you turn on the unit until you clear the track log (see page 26) or the track log becomes 100% full (see below).

5 WARNING TRACK LOG FULL!

You will see this message when the track log memory bank is full. The unit will not be able to store any more track log points until you clear the track log (see page 26). Select OK or the PAGE button to clear the message. The message will reappear each time you turn on the unit until the track log is cleared.

6 WARNING BATTERIES LOW!

This message appears approximately 30 minutes before your batteries need to be replaced. Select OK or the PAGE button to clear the message. Replace the batteries as soon as possible. The message will reappear every 10 minutes until the batteries are replaced.

7 NOTICE GPS IS OFF!

This message is displayed any time an action is requested which typically uses GPS satellite tracking, "GPS on" (example: marking a waypoint or navigating a route). While GPS mode is set to off, select YES to turn GPS on. Select NO to tell the GPS unit to assume that you are at your last calculated position.

World City Time Zones

Longitudinal Zone	<u>Offset</u>	
E172.50 to W172.50	12	Ε
IDLW (International Date Line West)	
W172.50 to W157.50	11	E
Nome		
W157.50 to W142.50	10	E
Honolulu		
W142.50 to W127.50	9	E
Yukon Standard		
W127.50 to W112.50	8	E
Los Angeles		_
W112.50 to W097.50	7	E
Denver		-
W097.50 to W082.50	6	E
Chicago	_	г
W082.50 to W067.50	5	E
New York		F
W067.50 to W052.50	4	E
	2	F
W052.50 to W037.50	3	E
Rio de Janeiro	2	F
W037.50 to W022.50	Z	L
Fernando de Noronha W022.50 to W007.50	1	F
Azores Island	I	L
A20185 ISIAIIU W007.50 to E007.50G	MT I O	
London	IVII +U	
LUIUUII		

E007.50 to E022.50+1
Rome
E022.50 to E037.50+2
Cairo
E037.50 to E052.50+3
Moscow
E052.50 to E067.50+4
Abu Dhabi
E067.50 to E082.50+5
Maldives
E082.50 to E097.50+6
Dhuburi
E097.50 to E112.50+7
Bangkok
E112.50 to E127.50+8
Hong Kong
E127.50 to E142.50+9
Tokyo
E142.50 to E157.50+10
Sydney
E157.50 to E172.50+11
Solomon Islands
E172.50 to W172.50+12
Auckland

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Sources of Interference / Errors:

GPS receivers have the potential for position errors due to interference, primarily from the following sources:

Ionosphere and troposphere delays

The satellite signal slows as it passes through the atmosphere. The system uses a built-in model that calculates an average – though not exact – amount of delay.

Signal multi-path

This occurs when the GPS signal is reflected off objects such as tall buildings before it reaches the receiver. This increases the travel time of the signal, causing errors.

Receiver clock errors

The built-in clock can have very slight timing errors.

Orbital errors

Also known as ephemeris errors, these are inaccuracies of the satellite's reported location.

Most common error

Most common error is not having a clear view of the sky, or being under very cloudy conditions, when a satellite signal may not be received.

Number of satellites visible

The more satellites the receiver can see, the better the accuracy. Buildings, terrain, electronic interference or even dense foliage can block signal reception, resulting in position errors or possibly no position reading at all. In general, the clearer the view of the sky is at your location, the better the reception will be. GPS receivers will not work indoors, underwater or underground.

Due to the errors that might occur, it is recommended that the serious navigator use a second navigational tool, such as a magnetic compass or map.

When satellite lock is lost

Whenever satellite lock is lost, the following animation sequence appears onscreen and continues to loop until satellite lock is re-acquired.



When GPS is turned Off

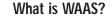
Whenever GPS is turned Off, the following animation sequence occurs and continues to loop until search is activated by user.



Also, all data fields (except for power status data fields) appear blank until GPS is turned On and satellite lock is re-acquired.







Wide Area Augmentation System (WAAS) is a GPS-based navigation system that provides precision above and beyond what GPS can do on its own. WAAS was designed to improve the accuracy and ensure the integrity of information coming from GPS satellites.

WAAS is a network of 25 ground reference stations that cover the entire U.S. plus parts of Canada and Mexico. Implemented by the Federal Aviation Administration (FAA) for aviation users, these reference stations are located at precisely surveyed spots and compare GPS distance measurements to known values. When the WAAS signal is available, WAAS-capable receivers typically have a much higher accuracy than non-WAAS units.

What is a Map Datum?

Maps and charts are essentially grids created from a starting reference point called a "datum." Many maps being used today were originally created decades ago. Over the years, technology has allowed us to improve our surveying skills and create more accurate maps. However, there is still a need to adapt GPS receivers to use with older maps.

Most navigational charts and maps will have the datum listed. Cobra Electronics Corporation[™] GPS receivers include up to 100 map datums that allow you to switch to a setting that matches your map. The most common US map datums are World Geodetic System 1984 (WGS 84), North American Datum 1983 (NAD 83) and North American Datum 1927 (NAD 27)

NOTE: Using a map datum that does not match the chart you are using can result in significant differences in position information.

About North Reference

The vertical grid lines on any map can be aligned in one of three different ways.

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"True North" means that the vertical lines are aligned with the geographic north pole. This is the most common method of orienting maps.

"Magnetic North" means that the vertical lines are aligned in the direction indicated as north by a compass, which can differ from True North to varying amounts, depending on where you are on the earth. (This difference is called "inclination" and "declination.")

"Grid North" refers to the direction in which the straight lines on a map are actually aligned, which may be slightly different from True North, because the rounded surface of the earth can not be accurately depicted on the flat surface of a map.



SPECIFICATIONS



Specifications subject to change. Temperature rating for the GPS 100 S may exceed the

() E

usable range of some batteries. Alkaline batteries can rupture at high temperatures.

- Alkaline batteries lose a significant amount of their capacity as temperature decreases.
- Use Lithium batteries when operating the GPS 100 S in
- below freezing conditions. Extensive use of screen backlighting will significantly reduce
- battery life. External power can only be applied using the Cobra
- Electronics Corporation[™] external power cord/cable.
- PERFORMANCE Receiver: .18 parallel channels .Approximately 10 sec. (warm) Acquisition Time: Approximately 35 sec. (cold) Approximately 50 sec. (first time) Update Rate: .1/second. continuous (selectable) Position Accuracy: .up to 3 meters (10 feet) Velocity Accuracy: ..0.1 knot / 0.1 km/h ...Performs to specifications to 6 g's Dynamics: Antenna: .Built-in patch antenna PHYSICAL ..Fully gasketted, high impact ABS Case: plastic, waterproof to 1 meter for 30 min (IPX7 standards) Size: .4.7" H x 2.3" W x 1.5" D (12 cm x 5.8 cm x 3.8 cm) Weiaht: **Operating Temperature Range:**.....5°F to 158°F (-15°C to 70°C) Storing Temperature Range:-40°F to 176°F (-40°C to 80°C) POWER .Two 1.5 volt AA batteries and/or Input: 12-volt DC external power
- (vehicle power adapter) Battery Life:.....Up to 20 hours in battery save mode Up to 10-12 hours in continuous operation out of save mode.

Maintenance of Your GPS 100 S Se

Your GPS 100 S is designed and built to give you years of trouble-free performance without the need for service. No routine maintenance is required.

If your unit does not appear to be operating properly, please follow these trouble-shooting steps:

Make sure you are using fresh batteries and they are installed properly.

Make sure you are outdoors and away from buildings and obstructions. Also, make sure you have a clear view of the sky.

 Make sure you have not accidentally turned GPS off (see page 33).

Customer Service

In the U.S.A., you can receive technical assistance with your unit through one of our customer support services:

Automated Help Desk is available in English 24 hours a day, 7 days a week at 773-889-3087. Customer Service Operators are available in English and Spanish at 773-889-3087 Monday to Friday, 8:00 a.m. to 6:00 p.m. CST. Questions can be faxed to 773-622-2269. Automated Technical Assistance is available in English or Spanish 24 hours, 7 days a week via e-mail at: productinfo@cobra.com On-line answers to frequently asked questions (in English only) can be found at: www.cobra.com.

Outside the U.S.A. please contact your local dealer.

Service

If you suspect that your unit requires service, please call 773-889-3087 BEFORE shipping it to Cobra Electronics Corporation[™]. This will ensure that you receive service as quickly as possible.

If you are asked to send your unit to the Cobra Electronics Corporation™ factory, please follow these steps:

1. Send the complete unit.

- 2. For warranty repair, enclose some form of proof-of-purchase, such as a photocopy or carbon copy of a sales receipt. If you send the original receipt, it cannot be returned to you.
- Enclose a typed or clearly written description of the problem you are having with your unit, plus the name and address where you want the unit returned.
- Pack the unit securely to prevent damage during transit. If possible, use the original packing materials.
- 5. Ship prepaid and insured using a traceable carrier such as United Parcel Service (UPS), Federal Express or first class mail with delivery confirmation. Ship to:

Cobra Factory Service Cobra Electronics Corporation 6500 West Cortland Street Chicago, IL 60707 USA

6. Please allow 3 to 4 weeks before contacting us about the status of your service. Call 773-889-3087 for assistance.

If your unit is under warranty, it will either be repaired or replaced upon receipt, depending on the model. If your unit is out of warranty, you will receive a letter informing you of the repair or replacement charge.

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Optional Accessories

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You can find fine accessories at your local Cobra Electronics CorporationTM dealer, or in the U.S.A. you can order directly from Cobra Electronics CorporationTM.

To order by phone in the U.S.A.

Call **773.889.3087** (Press 1 from the main menu 8 a.m.-6 p.m. M-F CST.)

To order by mail or fax in the U.S.A.

Call **773.889.3087** for pricing and availability. Please fill out order form on next page, and mail/fax directly to Cobra Electronics Corporation[™]. **Fax: 773.622.2269**

To order online Go to www.cobra.com



Cobra Electronics Corporation™ 6500 West Cortland Street Chicago, Illinois 60707 USA www.cobra.com

COBRA ELECTRONICS CORPORATION™

warrants that its GPS 100 S, and the component parts thereof, will be free of defects in workmanship and materials for period of one (1) year from the date of first consumer purchase. This warranty may be enforced by the first consumer purchaser, provided that the product is utilized within the U.S.A.

Cobra Electronics Corporation[™] will, without charge, repair or replace, at its option, defective GPS 100 S, products or component parts upon delivery to the Cobra Factory Service Department, accompanied by proof of the date of first consumer purchase, such as a duplicated copy of a sales receipt.

You must pay any initial shipping charges required to ship the product for warranty service, but the return charges will be at Cobra Electronics Corporation[™]'s expense, if the product is repaired or replaced under warranty.

This warranty gives you specific rights, and you may also have other rights which vary from state to state.

Exclusions: This limited warranty does not apply; 1) to any product damaged by accident; 2) in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs; 3) if the serial number has been altered, defaced or removed; 4) if the owner of the product resides outside the U.S.A.

Declaration of Conformity

Directive 1999/5/FC

Hereby, Cobra Electronics Corporation[™], declares that this

essential requirements and other relevant provisions of

Global Positioning System Receiver is in compliance with the

All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty.

Cobra Electronics Corporation[™] shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use or cost of installation.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.